0 04-04-02

1634

TORNEY DOCKET 017575.0661

2002 A VICE 1 1717

1.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Serial No. Filed:

SEP 0 3 2007

Examiner:

Group Art Unit:

Title:

Burgess et al. 09/880,652

August 14, 2001

Arthur, Lisa B.

1634

Methods of Labeling with Fluorescent Dyes RECEIVED

PATENT

09/880,652

SEP 0 9 2002

TECH CENTER 1600/2900

Biomolecules

HONORABLE ASSISTANT COMMISSIONER OF PATENTS WASHINGTON, D.C. 20231

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail No. EV141765071US addressed to: Assistant Commissioner of Patents, Washington, D.C. 20231, on the date shown Shannon Judice

102

Dear Sir:

INFORMATION DISCLOSURE STATEMENT

Applicants respectfully request, pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, that the references listed on the attached PTO-1449 form, and previously cited in U.S. Application Serial No. 09/460,718, filed December 14, 1999, by Applicant and entitled " Through Bond Energy Transfer in Fluorescent Dyes For Labeling Biological Molecules ," and now U.S. Patent No. 6,340,750 issued January 22, 2002 (the "Parent"), be considered and cited in the examination of the

AUS01:288111.1

2

above-identified divisional application. Pursuant to 37 C.F.R. § 1.98(d), Applicants are only enclosing a copy of the references that were <u>not</u> previously cited in the Parent. Furthermore, pursuant to 37 C.F.R. §\$1.97(g) and (h), no representation is made that these references are material to the patentability of the present application.

Applicants believe no fee is due, however, the Commissioner is hereby authorized to charge any fees to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

Michelle M. LeCointe Reg. No. 46,861

2001 Ross Avenue, Suite 600 Dallas, TX 75201-2980 (512)322-2580

Date.

AUS01:288111.1

	0 1 25	ns g					Page 1 of		
P10-1449				Application No.	Applicant(s)	Applicant(s)			
W		MART		09/880652		Burgess et al.			
0	THE	mation Disclos		Docket Number	Group A	t Unit Filing Da	ate		
		an Applica	ation	017575.0661	1634	1634 8/14/0			
SEP	0 3 2007	2 2		U.S. PATENT DOCUMENT	s	7.7			
		DOCUMENT NO. DATE		NAME	CLASS	SUBCLASS	FILING DATE		
TB/	DEMAR								
	В.								
				FOREIGN PATENT DOCUME	NTS				
		DOCUMENT NO.	DATE	COUNTRY	COUNTRY CLASS SUBCLASS		YES NO		
	C.				REC	EIVED			
	D.				CF.	P 0 9 2002			
				NON-PATENT DOCUMENT		r 0 3 2002			
		DOCUMENT (Including Author, Title, Source, and PertineTEGESENTER 1600/2900							
1	E.	Tyagi et al., "Molecular Beacons: Probes that flouresce upon hybridization." Nature Biotechnology 14, pp. 303-308 March 1996							
V	F.	Benson et al., "Heterodimeric DNA- binding dye designed for energy transfer: synthesis and spectroscopic properties." Nucleic Acids Res. 21, pp. 5727-5735							
Ŋ	G.	Kolimannsberger et al., "Electrogenerated chemiluminescense and proton-dependent switching of fluorescence: functionalized difluoroboradiaza-s-indacenes." Angnew. Chem. Int. Ed. Engl. Vol. 36, No. 12, pp. 1333-1335							
J	Н.	Geohegan, "Improved method for converting an unmodified peptide to an energy-transfer substrate for a proteinase." Bioconjugate Chem. 7, pp. 385-391							
V	I.	F. Sanger et al., "A Rapid Method for Determining Sequences in DNA by Primed Synthesis with DNA Polymerase," J. Mol Blol. (1975), Vol. 94, pp. 441-448							
1	J.	J. Mol Holl. (19/6), Vol. 94, pp. 441-448 12 F. Sanger et al., "DNA sequencing with chain-terminating inhibitors," Proc. Natl., Acad. Sci. U.S.A. (1977) Vol. 74, No. 12, pp. 5463-5467 December 2015.							
J	K.	L. M. Smith et al., "Fluorescence detection in automated DNA sequence analysis," Nature Vol. 321 pp. 674-679 6/12/86							
J	L.	T. Hunkapiller et al., "Large-Scale and Automated DNA Sequence Determination," Science, Vol. 254, pp. 59-67							
J	M.	T. Hunkapiller et al., "Large-scale DNA Sequencing," Analytical Biotech., Vol. 2, pp. 92-101							
·J	N.	L. M. Smith, "The Future of DNA Sequencing," Science, Vol. 262, pp. 530-532							
٧	Ο.	J. M. Prober et al., "A System for Rapid DNA Sequencing with Fluorescent Chain-Terminating Dideoxynucleotides," Science, Vol. 238, pp. 336-341							
v	P.	J. Ju et al., "Energy transfer primers: a new fluorescence labeling paradigm for DNA sequencing and analysis," Nature Med., Vol. 2, Number 2, pp. 246-249							
EXA	MINER				DATE CONSIDER	RED			
EXA	MINER:	Initial if citation considere	d, whether or not cits	ation is in conformance with MPEP	§ 609. Draw line throu	gh citation if not in con	formance and not		
				- FF					

SEP 0 9 2002

TECH CENTER 1600/2900

Burgess et al.

	0 4 20	DL 🖔	_								ugo z o.	
SE	0-144				Application No.		Applicant(s)					
8.		de			09/880652		Burgess et	al.				
W.	& tnfo	mation Disclos	ure Citatio	on	Docket Number		Group Art Unit Filing Da			9		
O!PE in an Application					017575.0661	1634	1634 8/14/01					
eri	0.00	T.		U.	S. PATENT DOCUMENT	rs						
	0 3 20	DOCUMENT NO. DATE			NAME		CLASS SUBCLASS		LASS	FILING DATE		
Ç,	Q. PADEM	S. S. C.										
	R											
	S.	L						L				
<u> </u>		F	, ,	FOR	EIGN PATENT DOCUME	NTS				TPAN	SLATION	
<u> </u>		DOCUMENT NO.	DATE		COUNTRY		CLASS	SUBCLASS		YES	NO	
	T.											
	U.											
-				NC	ON-PATENT DOCUMEN	TS						
		i .	DOCUMENT (in	cluding	Author, Title, Source, an	d Perti	nent Pages)				ATE	
J	V.	J. Ju et al., 'Fluorescence energy transfer dye-labeled primers for DNA sequencing and analysis,' Proc. Natl. Acad. Sci. USA, Vol. 92, pp. 4347-4351								May 1995		
V	W.	A. T. Woolley et al., "Ultra-High-Speed DNA Sequencing Using Capillary Electrophoresis Chips," Anal. Chem., 1995, Vol. 67, pp. 3676-3680									/15/95	
v	X.	Y. Wang et al., "Rapid Sizing of Short Tandem Repeat Alleles Using Capillary Array Electrophoresis and Energy- Transfer Fluorescent Primers," Anal. Chem., Vol. 67, No. 7, pp. 1197-1202								4	/1/95	
V	Y.	Iranser Fluorescent Primers; Anal. Chem., Vol. 67, No. 7, pp. 1197-1202 J. Ju et al., "Design and Synthesis of Fluorescence Energy Transfer Dye-Labeled Primers and Their Application for DNA Sequencing and Analysis," Analytical Blochem., Vol. 231, pp. 131-140 5/19/1								19/95		
V	Z.	Su-Chun Hung et al., *E Analytical Biochem., Vo	nergy Transfer	Primers v	vith 5- or 6-Carboxyrhoda op. 165-170	mine-6	G as Acceptor C	hromopho	res,"	1/	17/96	
J	AA.	John A. Brumbaugh et a Fluorophores," Proc. Na	al., "Continuous atl. Acad. Sci., V	, On-line I	DNA Sequencing Using C	Digodeo	oxynucleotide Pr	imers With	Multiple		21/88	
V	BB.	Stanley Tabor et al., "A Critical for Distinguishin 6339-6343	Single Residue g between Deo	in DNA F xy- and D	olymerases of the Esche ideoxyribonucleotides," P	richia c roc. Na	oli DNA Polymei tl. Acad. Sci. US	ase I Fami A, Vol. 92,	ily is pp.			
V	CC.	Jingyue Ju et al., "Cassette Labeling for Facile Construction of Energy Transfer Fluorescent Primers," Nucleic Acids								/1/96		
J	DD.	Res., 1996, Vol. 24, No. 6, pp. 1144-1148 M. L. Metzker et al., "Electrophoretically Uniform Fluorescent Dyes for Automated DNA Sequencing," Science, 1996, Vol. 271, pp. 1420-1422 with Reviewer's Comments										
J	EE.	Vol. 271, pp. 1420-1422 with Reviewer's Comments 3/8/98 S. Hung et al., "Comparison of Fluorescence Energy Transfer primers with Different Donor-Acceptor Dye Combinations," Analytical Blockementsty, 1998, Vol. 255, pp. 32-38 6/20/91										
1	FF.	Communitations, Altahyusa biochemissity, 1999, Vol. 229, pp. 32-39 K. Sonogashira et al., "A Convenient Synthesis of Acetylenes: Catalytic Substitutions of Acetylenic Hydrogen with Bromoglikenes, lodoarenes, and Bromogrifiches." Tetrahedron Letters, No. 50, pp. 4467-4470									/4/75	
J	GG.	Bromosikenes, icoositeries, and bromopyriomes, Tetrahedron Letters, No. 30, pp. 4407-4470 T. Maddux et al., "Stepwise Synthesis of Substituted Oligo(phenylenevinylene) via an Orthogonal Approach," J. Am. Chem. Soc., 1997, Vol. 119, pp. 844-845									29/96	
EX.	AMINER					D	ATE CONSIDERI	ED		- Or.		
EX.	AMINER:	Initial if citation considere	d, whether or not	citation is	in conformance with MPEI ic applicant.	P § 609.	Draw line throug	h citation if	REC	TEI	VFr	
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if processidered. Include copy of this form with next communication to the applicant. PTO-1449 Application No. Application No.												

09/880652

in an Application AUS01:284054.1

u.s. Information Disclosure Citation

Page 3 of 4 Docket Number Filing Date Group Art Unit 017575.0661 1634 8/14/01 0 3 2002 U.S. PATENT DOCUMENTS DOSUMENT NO. DATE NAME CLASS SUBCLASS FILING DATE RADEMAR (1 JJ KK. FOREIGN PATENT DOCUMENTS TRANSLATION SUBCLASS DOCUMENT NO. DATE COUNTRY CLASS YES NO LL. MANA NON-PATENT DOCUMENTS DOCUMENT (Including Author, Title, Source, and Pertinent Pages) DATE J. K. Young et al., "Synthesis of Sequence Specific Phenylacetylene Oligomers on an Insoluble Solid Support," J. NN. Am. Chem. Soc., 1994, Vol. 116, pp. 10841-10842 7/29/94 J. S. Schumm et al., "Iterative Divergent/Convergent Approach to Linear Conjugated Oligomers by Successive 00 Doubling of the Molecular Length: A Rapid Route to a 128.ANG.-Long Potential Molecular Wire," Angew. Chem., Int. Ed. Engl., 1994, Vol. 33, No. 13, pp. 1360-1363 1994 1 PP R. Giesa et al., "Soluble poly(1,4-phenyleneethynylene)s," Makromol Chem., 1990, Vol. 191, pp. 857-867 1990 J. L. Reddinger et al., "Luminescent Alkoxy-Functionalized Polyphenylenes," Abstr. Papers Am Chem. Soc., 1996. QQ. 211, 530-531 1996 T. M. Swager et al., "Fluorescence Studies of Poly(p-phenyleneethynylene)s: The Effect of Andiracene Substitution," RR J. Phys. Chem., 1995, Vol. 99, pp. 4886-4893 1995 C. Weder et al., "Efficient Solid-State Photoluminescence in New Poly(2,5-dialkoxy-p-phenyleneethynylene)s," SS. Marcomolecules, 1996, Vol. 29, pp. 5157-5165 1996 C. Devadoss et al., "Energy Transfer in Dendritic Macromolecules: Molecular Size Effects and the Role of an Energy TT Gradient," J. Am. Chem. Soc., 1996, Vol. 118, pp. 9635-9644 4/29/96 Z. Xu et al., "Phenylacetylene Dendrimers by the Divergent Convergent, and Double-Stage Convergent Methods, " UU. J. Am. Chem. Soc., 1994, Vol. 116, pp. 4537-4550 1994 J. M. Tour, "Conjugated Macromolecules of Precise Length and Constitution. Organic Synthesis for the Construction of Nanoarchitectures," Chem. Rev., 1996, Vol. 96, pp. 537-553 1996 v R. W. Wagner et al., "A Molecular Photonic Wire," J. Am. Chem Soc., 1994, Vol. 116, pp. 9759-9760 (including 9 ww (pages of Supplemental Material).

EXAMINER DATE CONSIDERED

Arrays," Pure & Appl. Chem., 1996, Vol. 68, No. 7, pp. 1373-1380

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

R. W. Wagner et al., "Boron-dipyrromethene Dyes for Incorporation in Synthetic Multi-pigment Light-harvesting

RECEIVED

7/19/94

1996

SEP 0 9 2002

TECH CENTER 1600/2900

XX

/		\$								
TO-1449				Application No. 09/880652	Applicant(s) Burgess el					
	APPE C	mation Disclos	ure Citation	Docket Number	Group Ar	t Unit	Filing Date			
		in an Applica	ation	017575.0661	017575.0661 1634			8/14/01		
				U.S. PATENT DOCUMEN	TS					
		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS		FILING DATE		
	YY.									
	ZZ.									
	AAA.									
				FOREIGN PATENT DOCUM	ENTS					
		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBG	CLASS	YES	ISLATION NO	
	BBB.									
	CCC.									
				NON-PATENT DOCUMEN	ITS					
		DOCUMENT (Including Author, Title, Source, and Pertinent Pages)						DATE		
4	DDD.	L.G. Lee et al., "New energy transfer dyes for DNA sequencing," Nucleic Acids Research 1997, Vol. 25, No. 14, pp. 2816-2822					5,	/22/97		
v	EEE.	A. Treibs et al., "Difluorboryl-Komplexe von Di- und Tripyrrylmethenen," Liebigs Ann. Chem. 1968, Vol. 718, pp. 208-223						2	2/2/68	
V	FFF.	T. Chen et al., "Synthesis of 2, 6-Diethyl-3-methacroyloxymethyl-1, 5, 7, 8-tetramethylpyrromethene-BF.sub.2 for the Preparation of New Solid-State Laser Dyes," Chem. 1997, Vol. 8, pp. 51-54						11	1/1/97	
J	GGG.	M. B. Goldfinger et al., "Directed Electrophilic Cyclizations: Effecient Methodology for the Synthesis of Fused Polycyclic Aromatics," J. Am. Chem. Soc. 1997, Vol. 119, pp. 4578-4593							1997	
J	ннн.	M. S. Vollmer et al., "Anthryloliogothlenylporphyrins: Energy Transfer and Light-Harvesting Systems," Chem. Eur., J. 1998, Vol. 4, No. 2, pp. 260-269							1998	
V	111,	M. S. Vollmer et al., "Steroid-Bridged Anthry/ollgothienylporphyrins: Synthesis and Study on the Intramolecular Energy Transfer," J. Org. Chem. 1998, Vol. 63, pp. 5080-5087					2/	11/98		
J	JJJ.	L.R. Middendorf et al., "	Large scale DNA s	sequencing," American Biotechr	nology Laboratory Augu	ıst 1988 8 F	Pages	Augi	ust 1988	
	KKK.									
	LLL.									
	ммм.									
	NNN.									
	000.									
E>	AMINER				DATE CONSIDER	ED				

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not

RECEIVED

SEP 0 9 2002

TECH CENTER 1600/2900

considered. Include copy of this form with next communication to the applicant.